

# COMMENTS/QUESTIONS REGARDING THE PROPOSED WASTE DISCHARGE REQUIREMENTS

1. David Drell, May 3, 2000: Requested information on the naturally occurring levels of chrome in soil at this site.

Staff Response: Current data at the Remco site suggest that the background concentration of total chromium in soil is approximately 50 parts per million (ppm).

2. David Drell, May 3, 2000: Requested information on whether Montgomery Watson had conducted polysulfide studies at sites with the same chemical mixture as present at Remco.

Staff Response: Montgomery Watson referenced work conducted using the calcium polysulfide at other sites where some of the chemicals found at the Remco site are present. However, Montgomery Watson indicated that the exact chemicals of concern found at Remco do not exactly match the prior studies, and indicated that the Remco study is intended to be a site-specific study.

3. Lew Dunn, May 3, 2000: Stated concerns with Provision #9, of the draft Waste Discharge Requirements regarding notification of non-compliance with the waste discharge requirements. Mr. Dunn asked whether the Trust would notify the Regional Water Board as required in the draft requirements since the prior operators had never notified the Board of non-compliance.

Staff Response: The Willits Trust is required to notify the Regional Water Board as stated in Provision #9, and Regional Water Board staff will conduct inspections to ensure compliance.

4. Lew Dunn, May 3, 2000: Requested that an alarm system be installed to detect hydrogen sulfide gas.

Staff Response: The discharger is required to implement an air monitoring program to detect hydrogen sulfide gas during and after the study, and Regional Board staff has requested addition of an alarm system.

5. Donna Avila, Willits Citizens for Environmental Justice, May 3, 2000: Indicated concerns with Provision 9 of the draft waste discharge requirements. She does not believe the pilot study is safe, and questions whether the dischargers would self-report problems. She further indicates that Remco dumped chemicals in her yard and burned chemicals at the Remco site.

Staff Response: Several issues related to the safety of the project have been raised by many commenters. The principal issue involves potential hydrogen sulfide generation. The revised Health and Safety Plan and air monitoring plan specifically addresses hydrogen sulfide gas generation. In addition, the Monitoring and Reporting Program requires air monitoring for hydrogen sulfide during the pilot study and for several months following the study. Regarding the comment on dumping, staff will continue to

require the full extent of contamination be determined and appropriate remedial actions be developed.

6. Pauline Craig, May 3, 2000: Requested clarification on whether the equipment is capable of drilling deeper than 20 feet, and whether drilling into the B and C zones would occur.

Staff Response: The equipment used to inject the calcium polysulfide is capable of drilling greater than 20 feet below ground surface. The pilot test does not include drilling into the B and C zones.

7. Mike Adair, May 3, 2000: Requested clarification on potential effects of the pilot test on the volatile organic compounds.

Response: One of the objectives of the pilot study is to monitor the affect of the pilot study on volatile organic compounds, and whether enhanced remediation occurs.

8. Linda Branscomb, May 3, 2000: Commented on familiarity with Geysers hydrogen sulfide monitoring and requested clarification on the range of lime sulfur being added to the test area, and specifically requested the concentration of hydrogen sulfide being generated by the treatment.

Response: Montgomery Watson in their Specific Responses to Comment Letters dated May 22, 2000, indicated that concentrations of contaminants in the pilot study area include chromium at about 300,000 ppb, VOCs at about 1,000 ppb (total of all volatile organic compounds), and TCE at about 600 ppb. Petroleum hydrocarbons (gas and diesel) are detected in low levels of about 500 ppb. Lime sulfur will be discharged at each injection point a 150 gallons/injection. Lime sulfur is 29 percent strength calcium polysulfide. 100 gallons of potable water will be placed at each point. Total sulfur concentrations of approximately 5,000 mg/l--present as hydrogen sulfide, sulfate and sulfite--is typically found after a week following injecting and drops off extremely rapidly to the tens to hundreds of mg/l of sulfate. Sulfate is expected to decrease over a month or two to values less than the ambient sulfur concentrations.

9. Linda Branscomb, May 3, 2000: Requested clarification on the chemical reaction with VOCs and petroleum hydrocarbons.

Staff Response: See response to No. 7 above.

10. Linda Branscomb, May 3, 2000: Expressed concern that this process is not covered by the California Environmental Quality Act (CEQA).

Staff Response: CEQA documents have been prepared for the proposed pilot study.

11. Kurt and Phyllis Schiessl, May 6, 2000: Expressed concern about the impact of the remediation on property values in that there could be noise, and requested such impacts be limited to the extent practicable.

Staff Response: The work conducted on and off of the Remco site should consider noise and nuisance conditions. The Environmental Checklist addresses noise for the pilot test and noise will be of very short duration.

12. Mary Masters, U.S. EPA, Technical Outreach Services for Communities, representing the Willits Citizens for Environmental Justice and the Willits Environmental Center, May 3, 2000: Requested additional details on the supporting documentation on using the calcium polysulfide treatment to ensure the Willits setting is similar to referenced treatments.

Staff Response: Montgomery Watson provided a description of the sites where they have used the calcium polysulfide remedy, and discussed which of these sites have similar high groundwater, lack hydraulic control, etc. There is no site where all the same conditions as the Remco site exist as a case study, and for this reason site-specific efficacy information needs to be obtained through the pilot study.

13. Earl James, Erler and Kalinowski, Inc., consultants to the City of Willits, April 28, 2000, June 27, 2000, and July 11, 2000; and Mary Masters, U. S. EPA, Technical Outreach Services for Communities, May 3, 2000: Requested clarification on whether hydrogen sulfide generated during the test poses a health and safety or environmental threat. Also requested information on monitoring specifics for the site to ensure no health and safety issues arise.

Staff Response: Generation of hydrogen sulfide above the ground is not expected to exceed levels safe for human health exposure. The health and safety plan has been revised to include an air monitoring program. In addition, Monitoring and Reporting Program also requires air monitoring for hydrogen sulfide. A Jerome meter will be used for the air monitoring program which is capable of detecting hydrogen sulfide gas at 1 part per billion. Specific details on the air monitoring plan in the nearby community are necessary and have been requested by the Regional Water Board staff. In addition, a single injection of polysulfide is anticipated, followed by assessment of ambient hydrogen sulfide concentrations around the point of injection for 24 hours. Only after this initial injection will the remaining test injections occur.

14. Mary Masters, U. S. EPA, Technical Outreach Services for Communities, May 3, 2000: Requested information on the expected sulfate concentration and trivalent chromium concentration as a result of the reaction, and whether resident bacteria would be able to transform the sulfate.

Staff Response: Montgomery Watson's response to comments dated May 22, 2000, indicate that sulfate concentrations will not increase much above background. Site information includes sulfate sampling from monitoring well MW 24A, MW-21A, and MW-22A. In these wells, sulfate as SO<sub>4</sub> was found at concentrations of 80.9, 22.2 and 55.2 ppm, respectively.

At the Coast Wood Preserving Site in Ukiah, calcium polysulfide also has been used as a reductant. Sulfate concentrations at Coast Wood varied from 3.6 mg/l up to 82 mg/l prior to injecting calcium polysulfide. The sulfate concentrations present in

groundwater within the injection area after two injections range from a low of 5 mg/l to a high of 4,900 mg/l.

15. Earl James, Erler & Kalinowski, Inc., consultants to City of Willits, April 28, 2000; and Mary Masters, U. S. EPA, Technical Outreach Services for Communities, May 3, 2000: Requested clarification on hydraulic control of the plume, with respect to how sulfate and manganese produced by polysulfide would be prevented from migrating, particularly if sulfur reducing bacteria react more slowly than the polysulfide oxidation reaction.

Staff Response: Montgomery Watson indicates that the sulfate and manganese produced by polysulfide does not move appreciably from the injection point, and for this reason no hydraulic control is proposed or is necessary as part of this pilot test. Further, the pilot study proposal has been reduced in scope and relocated to an area further into the Remco building. The calcium polysulfide pilot study has been scaled down to 13 injection points. Regional Water Board staff recognizes that sulfate concentrations will increase in groundwater within the pilot study area. This increase is expected to be temporary and decline to background conditions within one year of the pilot study. Groundwater in the area of the pilot study currently is not used for domestic supply. Response to comment No. #14 contains information on the Coast Wood site.

16. Mary Masters, U. S. EPA, Technical Outreach Services for Communities, May 3, 2000. Expressed concern that delivery/distribution of the calcium polysulfide would be difficult in the heterogeneous, fine-grained subsurface and that 24 injection points would be needed. Hydrofracturing is planned at three elevations within each injection location, down to 20 feet below ground surface.

Staff Response: Montgomery Watson states that hydrofracturing technique will be utilized to distribute calcium polysulfide for the study.

17. Earl James, Erler & Kalinowski, Inc., consultants to City of Willits, April 23, 2000; and Mary Masters, U. S. EPA, Technical Outreach Services for Communities, May 3, 2000: Questioned the means to prevent contaminated groundwater from discharging to surface water. Sampling should be conducted to ensure byproducts of the injection process are not migrating to surface water.

Staff Response: The calcium polysulfide pilot study area has been moved further inside the building and away from the storm drain line. It is expected that the fine grained material at the site will inhibit flow and hence hydraulic control of the plume will not be necessary to control migration of injection process byproducts beyond the site. The monitoring and reporting program has been revised to require surface water monitoring for sulfate, magnesium, and other potential byproducts of the in-situ pilot study. Montgomery Watson indicates that the byproducts such as sulfate and magnesium do not move further than 20 feet from the point of injection. This contention will be confirmed through groundwater and surface water monitoring.

18. Mary Masters, U. S. EPA, Technical Outreach Services for Communities, May 3, 2000: Questioned why no other technologies such as sodium dithionite and zero valent permeable reactive walls have been considered.

Staff Response: This is a pilot test, and additional remedies or treatments need to be considered in a feasibility study before a final remedial action plan can be accepted. At the present time, Montgomery Watson indicates they are testing the polysulfide treatment. Further, Montgomery Watson offered in the response to comments that the dithionite requires greater reactivity in comparison to polysulfide and therefore Montgomery Watson suggests it offers no benefit. Regional Water Board staff has reviewed the two technologies and found that both may be effective in reducing chromium. Staff reviewed information on two sites where sodium dithionite has been used. One site is located in Hanford where groundwater is 50 feet below ground surface, and another site is in Elizabeth City, North Carolina, where the depth to groundwater is 5-6 feet below ground surface. The pilot study at Elizabeth City involved injecting 500 gallons of sodium dithionite at one injection point. 500 gallons of sodium dithionite were fed into the injection point over a time period of 38 hours. Sodium dithionite changes the pH to very acidic conditions and a buffer solution of potassium bicarbonate was used to stabilize the pH. The U.S. EPA contact who has studied sodium dithionite reported positive results from the pilot study, and is in the process of starting a full-scale treatment project. The reductant sodium dithionite also increases levels of sulfate in groundwater, however, U.S. EPA does not expect it to migrate appreciably. Air monitoring was conducted during the pilot test of sodium dithionite, and no hydrogen sulfide gas was detected. The U.S. EPA contact stated that if the full scale in-place test performs as well as the pilot study, EPA would consider no further action following one year of groundwater monitoring.

Permeable reactive walls can also be effective in reducing chromium and volatile organic compounds. There are limitations to iron reactive walls due to feasibility of excavating to depth. However, there may be other alternative methods for constructing reactive walls which should be discussed in the evaluation of cleanup alternatives, separate from this pilot study.

19. Mary Masters, U. S. EPA, Technical Outreach Services for Communities, May 3, 2000; and Earl James, Erler and Kalinowski, Inc., Consultants for the City of Willits, April 23, 2000: Requested clarification that hexavalent chromium will not appear years later as trivalent chromium is oxidized.

Staff Response: See also response to comment numbers 29, 30, and 31. Data submitted by Montgomery Watson suggests that naturally occurring pH and Eh (oxidation reduction potential) conditions in the vicinity of the Willits site are insufficient for the reoxidation of trivalent chromium to hexavalent chromium. Regional Water Board staff concurs with this assessment, and do not expect that the normal pH and Eh of the site to change. However, long term groundwater monitoring (Eh and pH) at this site will continue to evaluate the conditions. Eh and pH have been included in the monitoring and reporting program. Re-appearance of hexavalent chromium would require a modified remedial action.

20. Earl James, Erler and Kalinowski, Inc., Consultants for the City of Willits, April 23, 2000: Requested clarification on the types of contingency plans that will be in place in the event

there is a surface water discharge from the polysulfide treatment, and questioned whether the test should be postponed until hydraulic control of the plume has been achieved.

Staff Response: The pilot study has been scaled down and relocated further away from the storm drain. The source of the storm water infiltration into the storm drain line has been determined. The concrete used to seal the drop inlet to the drain line was cracked, allowing groundwater to seep into the drop inlets and storm drain line. Sealing of the drop inlets to the storm drain line is proposed to start on July 17, 2000. Monitoring of the surface water and groundwater monitoring wells in the area will evaluate the limits of the polysulfide treatment. The draft Waste Discharge Requirements prohibit the discharge of the reductant to waters of the State. Violations of the waste discharge requirements are not anticipated, however, prompt corrective action will be required should there be a discharge of reductants to the storm drain. As previously stated in this response to comments, sulfate is not expected to migrate from the injection point. The closest injection point in the calcium polysulfide study is approximately 45 feet from the storm drain.

21. Earl James, Erler and Kalinowski, Consultants for the City of Willits, May 23, 2000: Requested information on the calculation of the dosage to ensure that the calcium polysulfide mass is neither excessive nor insufficient to achieve project goals.

Response: Montgomery Watson states that experience has shown that field doses must be increased by a factor of at least 10 compared to laboratory derived doses, and that two different doses are proposed.

22. Earl James, Erler and Kalinowski, Inc., Consultants for the City of Willits, April 23, 2000: The test evaluation should include leachable chromium and total chromium, total sulfide and reactive sulfide in soil.

Staff Response: Chromium concentrations (soluble and total) are required to be analyzed in groundwater. Soil levels caused by precipitation of chromium from groundwater are not expected to increase background ambient levels of soil trivalent chromium.

23. Earl James, Erler and Kalinowski, Inc., Consultants for the City of Willits, April 23, 2000: Requested that the number of wells within the test area be reduced and add wells outside the test area and downgradient.

Staff Response: One groundwater monitoring well has been added in a downgradient direction and near the property line.

24. Earl James, Erler and Kalinowski, Consultants for the City of Willits, April 23, 2000: Requested clarification on whether the molasses may cause extremely elevated concentrations of hydrogen sulfides and reactive solid sulfides. Further, if soils ultimately need to be excavated, requested clarification on the influence of the added calcium polysulfide in affecting disposal options for the soil.

Staff Response: Montgomery Watson states that the sulfides are consumed by reaction with reducible material, and do not remain to form reactive sulfides. In addition, the treatment would not change the waste classification of the soils.

25. Earl James, Erler and Kalinowski, Consultants for the City of Willits, April 23, 2000: Requested that a detailed Health and Safety plan include plans to monitor hydrogen sulfide. A Jerome meter should be used to detect hydrogen sulfide gas.

Staff Response: The health and safety plan has been modified to include air monitoring, and air monitoring is also required by the Monitoring and Reporting Program to ensure compliance with Waste Discharge Requirements, which prohibit levels of hydrogen sulfide from exceeding 0.030 parts per million by volume (ppmv). The health and safety plan has been augmented to include safe handling of the calcium polysulfide. The health and safety plan augments the existing health and safety plan for the site. The health and safety plan states that an air monitoring program will be conducted to ensure worker safety as well as the general public. Regional Water Board staff has requested additional details for the proposed air monitoring plan, including the use of fixed hydrogen sulfide meters with an alarm system inside the building, and the Monitoring and Reporting Program specifies a Jerome meter be used for such monitoring.

26. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Requested clarification on whether, given the scope of the pilot project, this pilot project would be the final remedial activity since no future additional tests are planned or outlined.

Staff Response: The pilot study is being conducted to evaluate calcium polysulfide as a possible remedy. No decisions have been made as to the final remedy for the site, and a feasibility study is required to assess possible site cleanup remedies.

27. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Requested that, prior to a final remedy using in-situ treatment, the full extent of contamination be characterized.

Staff Response: Regional Water Board staff concurs that the full extent of contamination needs to be determined prior to selection of a final remedy.

28. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Indicated that a sufficient monitoring network be in place to evaluate performance.

Staff Response: Additional temporary groundwater monitoring wells have been proposed to adequately evaluate the pilot study.

29. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Requested clarification on whether any naturally occurring substances or contaminants would react with the injected chemical and diminish its effectiveness.



Staff Response: Montgomery Watson reports that there are other reducible constituents in the area, including iron, and these constituents will consume a portion of calcium polysulfide. Montgomery Watson states that consumption does not prevent effectiveness of the in-situ system if sufficient dosage is used.

30. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Requested clarification on whether the amount of hexavalent chromium (Cr+6) and other reactive chemicals could exceed the capacity of the injected reducing agent, and suggested that the stoichiometry of the chemical reaction must be verified in the groundwater by sensitive titration measurements.

Staff Response: Montgomery Watson states that calcium polysulfide has been shown to be effective in reducing the concentrations of Cr+6 in the several grams per liter range. Since other constituents will also react with the calcium polysulfide, Montgomery Watson indicates that the injection will be at a factor of approximately ten times the stoichiometric requirement. This dosage is based on experience with similar sites, and dosage is one of the parameters to be evaluated as part of the pilot test. Our experience shows that the appropriate dosage rate is best evaluated in the field under actual site conditions.

31. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Requested clarification that the time frame for reducing Cr+6 to Cr+3 would not exceed the pollutant transport time frame out of the zone of treatment.

Staff Response: Montgomery Watson reports that the calcium polysulfide is capable of reducing Cr+6 to Cr+3 in a matter of days to weeks. Chromium migration at the site in groundwater is slow due to the very low permeable soils. At the Coast Wood Preserving site, chromium was reduced in groundwater near the retorts (wood preserving pressure cylinders) from a high of 28 ppm to less than 0.05 ppm in 13 weeks.

32. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Expressed concern that the Cr+3 stay insoluble and not be oxidized.

Staff Response: See response to comments Numbers 19, 30, and 31.

33. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Expressed concern that the injected chemical should ideally be non-toxic or with a very low toxicity in aqueous solution and there should not be a de novo production of hazardous contaminants. Salinas suggest that since Cr+6 is co-located with a number of VOCs at the Remco facility, it is very difficult to predict the type of potential reaction products that could result as a result of the redox treatment, and the reaction products would be generated in the groundwater with the potential migration to the surface or with the groundwater.

Staff Response: The Regional Board staff shares concern that no toxic byproducts of the treatment migrate in groundwater or discharge to surface waters, and believes the

groundwater and surface water monitoring would assess any threat and allow actions to be taken that could prevent further migration.

34. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Requests that the project demonstrate reduction of Cr+6 to Cr+3 in the aquifer by mass balance, and demonstrate that Cr +6 precipitates are not forming in the aquifer.

Staff Response: Montgomery Watson states that the monitoring program will evaluate and demonstrate that hexavalent chromium is being reduced to the trivalent form. Hexavalent chromium does not precipitate under normal environmental conditions; thus, no Cr +6 precipitates are known or anticipated. Barium chromate is a common mineral, but it is unlikely to be present at the Remco site in high concentrations, due to the presence of sulfate ion, which would compete with the chromate ion. Montgomery Watson also states that chromate ion does undergo anion exchange or sorption, which can result in the presence of a solid-phase reservoir or chromate ion.

35. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Indicated that performance of the test needs to be carefully evaluated, as the physical, chemical and environmental conditions in the aquifer are not expected to significantly change, for example, in the form of pH or influx of other reducing/oxidizing agents, and re-mobilization of the precipitated chromium might occur. Stabilization of in-situ insoluble Cr+3 may require additional reduction strategies such as use of organic waste, Fe (II)-containing salts, or organic acids, which may additionally contribute to the overall potential risk.

Staff Response: The Regional Water Board concurs that evaluation of the utility of this treatment needs to assure that re-mobilization does not occur. Montgomery Watson states that following treatment, it is anticipated that the site geochemistry will slowly return to background conditions. These ambient conditions will favor the thermodynamic stability of trivalent chromium. Introduction of other reducing or oxidizing agents is not anticipated based on likely future land uses. Adequate verification monitoring, as well as the need for potential institutional controls will be evaluated as part of selection of the final site remedy.

36. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Commented that the presence of anaerobic sulfate-reducing bacteria (SRBs) in the subsurface soil and aquifer should be established, as SRBs would reduce sulfate to sulfide further accomplishing additional Cr (+6) reduction.

Staff Response: The monitoring program will involve the determination of the sulfate-reducing bacterial (SRB) population under conditions prior to and generated by the treatment, and in background groundwater. Montgomery Watson states that existing data indicate that the sulfate-reducing population in the source area are low, likely as a result of the toxicity of the elevated chromium concentrations in the subsurface. Data from other sites has shown a significant increase in SRB as a result of the addition of polysulfide. Carbon source addition was proposed to ensure the SRB populations are

not limited due to lack of food source. However, sufficient organic carbon is detected in the soil such that this should not be limiting.

37. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Commented that the pH of the plume would need to stay between 5 and 12 for Cr+3 to precipitate as Cr [OH]3 or as part of a solid solution with Fe (III) and therefore keeping Cr+3 concentrations below the MCL (for total chrome) of 1 umole/L (50 ug/L).

Staff Response: Montgomery Watson states that the pH in the plume will remain near neutral, or slightly alkaline of neutral. The calcium polysulfide solution, in its concentrated form, has a pH of approximately 12.5, but dilution coupled with the buffering capacity of the aquifer will result in pH in the range of 7 to 8.

38. Julio Salinas, Office of Environmental Health Hazard Assessment, April 27, 2000. Commented that natural attenuation may favor the desired conversion of Cr +6 to Cr +3, but this needs to be demonstrated, since presence of other reductants and MnO2 in the aquifer may alter the chemical equilibrium resulting in steady-state concentrations that may exceed the MCL. If the remedial alternative relies on natural attenuation, it should be demonstrated that: (a) there are natural reductants present in the aquifer; (b) the amount of Cr +6 and other reactive chemicals do not exceed the capacity of the aquifer to reduce them; (c) the rate of Cr +3 reduction is greater than the rate of transport of the aqueous Cr +6 from the site; (d) the Cr +3 remains immobile, and (e) there is no net oxidation of Cr +3 to Cr +6.

Staff Response: Regional Board staff concurs that the pilot test will need to demonstrate these matters.

## **COMMENTS/QUESTIONS ON THE OVERALL SITE OR REMEDIAL INVESTIGATION**

39. Pauleen Craig, May 3, 2000: Requested status of the shallow groundwater pump and treat system, and clarification on distance and depth of drilling to determine how far the contamination has migrated, and velocity of groundwater flow.

Staff Response: The pump and treat system is operating, but is only partially effective due to the low permeability of the soils. Borings have been drilled to depths varying between 65-80 feet bgs. Groundwater flow rates are approximately 10-30 feet per year at depths less than 30 feet below ground surface. At depths greater than 30 feet, the aquifer is more permeable and groundwater velocity is greater.

40. Maria [last name unknown], May 3, 2000: Requested information on whether dioxins and polychlorinated biphenyls (PCBs) were illegally dumped at the site and whether these contaminants have been assessed.

Staff Response: No available information currently identifies a source for dioxins or PCBs at the site. However, some limited sampling for PCBs has been conducted in shallow surface soil samples. The results of the sampling do not show detectable levels of PCBs. There has been no testing for dioxins.

41. Pam Arlich, May 3, 2000: Indicated concern that groundwater underlying the Baechtel Grove School has not been tested.

Staff Response: Available information indicates that the prevailing groundwater gradient is in a direction opposite the school.

42. Lew Dunn, May 3, 2000: Stated that groundwater from Remco flows onto Baechtel School, and that the ditch along the railroad tracks is where Remco dumped chemicals. This ditch area floods in the wintertime onto the school grounds from under the railroad tracks.

Staff Response: Baechtel School is located south of the California Western Railroad property and that of the Remco facility. Groundwater from the Remco facility flows to the northeast and north, away from the railroad property as discussed above. Groundwater would therefore not flow in this direction nor flood the school. There is an unnamed tributary to Baechtel Creek between the Remco site and Baechtel School, and this unnamed tributary may be the source of flooding in the area. Regional Water Board staff has evaluated the surface water pathways from the Remco facility and has found that the elevation of the California Western Railroad tracks which is located in between the Remco site and the unnamed tributary to Baechtel Creek is higher than the elevation of the Remco facility. Regional Water Board staff has walked the unnamed tributary and has found no mechanism such as a culvert underneath the railroad tracks

that would allow surface water runoff from the Remco property to the unnamed tributary. Regional Water Board staff has also contacted the City of Willits Public Works Department for historical records and has found no information of the existence of an old culvert underneath the railroad tracks.

43. Lew Dunn, May 3, 2000: Stated that hexavalent chromium has been detected in soils in Broaddus Creek, which should be investigated.

Staff Response: The extent of contamination at the Remco site has not yet been determined but Broaddus Creek is not anticipated to be affected by Remco site releases. Mr. Dunn should submit the laboratory data including the chain of custody and map depicting the sampling location(s), and staff will follow up on the matter.

44. Pauline Craig, May 3, 2000: Requested clarification on whether the site has been determined to be an official Superfund site.

Staff Response: The Remco site is not currently designated as either a federal or state Superfund site. The process for designation as federal superfund site is lengthy, and is dependent on the nature of the contamination and severity of threat to people and the environment. The first step is to be identified on the Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS). Once identified on CERCLIS, the U.S. EPA performs a preliminary assessment of the available information to determine if further assessment is warranted. U.S. EPA conducted such an assessment at the site many years ago. Based on the available information at that time, U.S. EPA determined that the site did not require further federal action. However, since issuing this early report, considerable new information has been developed such as the nature and extent of discharges and resulting contamination. U.S. EPA has informed the Regional Water Board staff that a revision to the prior report is underway, but the revision has yet to be completed.

45. Kurt and Phyllis Schiessl, May 6, 2000: Requested assurance that the health risks be identified and at risk people be notified.

Staff Response: The purpose of a tiered approach to the project (pilot study, monitoring, determination of alternatives) is to build a defensible record of risks and benefits associated with continued remedial activities at the site.

46. Kurt and Phyllis Schiessl, May 6, 2000: Requested that the site and adjacent properties be cleaned up in a timely manner.

Staff Response: Regional Water Board staff concur with the comment that the site and adjacent properties be cleaned up, and are working with the responsible parties to ensure that the site and adjacent properties are adequately investigated and a final and effective cleanup remedy be identified to protect human health and the environment. Periodic updates on the progress for site cleanup will be provided to all interested parties including the commenter. The timing of the cleanup as set out in Cleanup and

Abatement Order No. 99-55 and revised to be consistent with the Consent Decree requires submittal of a final Remedial Action Plan by May 15, 2002.

47. Kurt and Phyllis Schiessl, May 6, 2000: Expressed concern about the impact of the remediation on property values in that there could be noise, and requested such impacts be limited to the extent practicable.

Staff Response: The work conducted on and off of the Remco site should not result in the creation of a nuisance. We will ensure that all work proposed for the site and the Schiessl's property address nuisance conditions such as noise. The overall site does impact property values. Implementing the pilot study is not expected to add to any stigma associated with the site.

48. Scott Lyall, May 10, 2000. Mr. Lyall would like to see the process go forward.

Staff Response: Staff concurs.